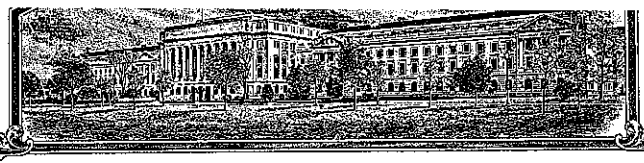
No. 9800153



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

State of Oregon, Acting by and through the State Board of Higher Education on behalf of Oregon State University

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, DURUM

'Connie'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fourteenth day of June, in the year of our Lord two thousand one.

Attest:

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
State of Oregon, Acting by and through the State Board of Higher Education on behalf of Oregon State University

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
OR3920036

3. VARIETY NAME
Connie

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
c/o Office of Technology Transfer
Oregon State University
312 Kerr Administration Building
Corvallis, Oregon 97331-2140

5. TELEPHONE *(include area code)*
(541)737-0674

6. FAX *(include area code)*
(541)737-3093

FOR OFFICIAL USE ONLY

PVPO NUMBER: 9800153

FILING DATE: 3-4-1998

FEES RECEIVED
FILING AND EXAMINATION FEE: $ 2450 —
DATE: March 9, 1998
CERTIFICATION FEE: $ 320.00/00
DATE: 2/28/01

7. GENUS AND SPECIES NAME
Triticum, turgidun var durum

8. FAMILY NAME *(Botanical)*
Graminecae

9. CROP KIND NAME *(Common name)*
Durum wheat

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.) (Common name)*
Non-profit public institution of higher education

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Oregon

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Brownstein, Rask, Arenz, Sweeney, Kerr & Grim, LLP
Attn: Stephen E. Blackman
1200 S.W. Main
Portland, Oregon 97205

14. TELEPHONE *(include area code)*
(503)221-1772

15. FAX *(include area code)*
(503)221-1074

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of the Variety
d. ☒ Exhibit D. Additional Description of the Variety
e. ☒ Exhibit E. Statement of the Basis of the Applicant's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)*
g. ☒ Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)?*
☒ YES *(If "yes," answer items 18 and 19 below)* ☐ NO *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☒ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☒ YES *(If "yes," give names of countries and dates)* ☐ NO
United States

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
William Hostetler			
NAME *(Please print or type)*		NAME *(Please print or type)*	
William Hostetler			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Director Technology Transfer Oregon State University	2/10/98		

SD-470 (04-96) *(Previous editions are to be destroyed)* *(See reverse for instructions and information collection burden statement)*

Additional information requested in Application Form (Form SD-740), question 20:

Include this paragraph in question 20 of Form SD-740:

Breeder seed (harvested from phenotypically uniform and true-to-type head-rows) was provided to the Pendleton Flour Mills Inc. in the Fall of 1996. Oregon State University has granted exclusive marketing rights for OR 3920036 to the Pendleton Flour Mills Inc. (Pendleton-Oregon). The Pendleton Flour Mills Inc. have contracted, on an exclusive basis, Mc Kay Seed Company Inc. (Route 1, Box 41, Almira, Washington 99103) to produce and sell registered class seed of OR 3920036. Breeder seed was planted in the fall of 1996 to produce foundation seed. Resulting seed were harvested in the summer 1997 and planted at two locations, namely near Echo-Oregon and near Mattawa-Washington. These fields were inspected by the Oregon Seed Certification and the Washington Crop Improvement Association, respectively. The first commercial seed sales (registered seed) of OR 3920036 occurred between September and November 1998, exclusively in the US, under the name "CONNIE". The name has been cleared through the USDA.

Exhibit C, Section 13 G: Phenol Reaction.

Erase the number (4) presently entered in the box. Just write "See appendix D: Seed Laboratory Examination Report".
Include the following as an addendum to Appendix C:

Possible explanation for lack of phenol staining uniformity:

The lack of staining uniformity might be due to variation, within the sample tested, in grain hardness and/or vitreousness. This can be expected to occur when growing conditions and/or fertilization were not conducive to the production of 100% hard-vitreous kernels. This is a common occurrence when plants are grown to maximize seed yield during seed production as opposed to being grown to produce adequate end use quality for commercial use.

Additional correction (not mentioned by examiner), Appendix C, Section 9:

PLANT HEIGHT: *Presently reads "40 cm taller than SWW Stephens". Should be "40 cm shorter than SWW Stephens". Please make correction.*

EXHIBIT A. Origin and Breeding History of the Variety:

16a

(1) Selection OR 3920036, a winter durum wheat named Connie. Selection OR 3920036 resulted from a spring x winter cross and has the following pedigree: **7-5/Valgerardo//Edmore///Topaz.** The first cross involved 7-5 (a winter durum breeding line of unknown pedigree from Turkey) to Valgerardo (A spring durum cultivar from Italy). Progeny from this cross was top-crossed to Edmore (a spring durum cultivar from the US) and the resulting F_1 was crossed to Topaz, a winter durum variety from Romania.**

(2) Individual plant selection (spaced plants) was performed visually in the F_2 generation planted in Corvallis, Oregon. Plants were selected for profuse tillering, reduced incidence of stripe and leaf rust and Septoria tritici, reduced plant height, large spike size and apparent spike fertility. Selected plants were threshed individually and selection for desirable seed characteristics was performed visually. Characteristics sought were large seed size, kernel vitreousness or absence of starchy kernels, absence of "black tip", reduced crease size and intense yellow color. A modified pedigree system of breeding was used in subsequent generations which were planted in Pendleton, Oregon (target area for durum production). Seed from selected F_2 plants were solid seeded in three row plots producing F_3 families. Selection among F_3 families was based on a visual evaluation of the tillering capacity, overall biomass production, spike number and size, and overall plot uniformity. From the selected F_3 families, 25 spikes were harvested from the middle row of the plot. Seed from these 25 spikes were threshed in bulk and evaluated visually for the same grain characteristics as in the F_2 generation. Seed from selected F3 families were then planted in three row plots to produce F_4 families. Selection was performed among and within F_4 plots as described for the F_3 generation, with added emphasis on plot uniformity. From each selected F_4 plot, spikes were harvested from the middle row, threshed individually and planted as individual head rows to obtain the F_5 generation. Individual F_5 head rows were again selected for tillering capacity, overall biomass, spike number and size, apparent spike fertility and good grain filling. After harvesting the individual head rows, selection was performed for desirable grain characteristics as described in the selection of F_2 plants. Seed from selected F5 head rows were planted as F_6 lines in solid –seeded, non-replicated preliminary yield trials (5 x 20 ft plots) using an augmented design. The most promising lines were advanced into replicated yield trials with either three or four replications grown at the Rugg's site, near Pendleton, Oregon. Special studies on seeding rates and fertility responses were also conducted. During the yield trial stages, small scale quality testing was conducted (grain protein content, gluten strength as estimated by the SDS-micro sedimentation test and yellow pigment content). OR 3920036 was identified as the most promising line and 1000 spikes were established as head rows. Phenotypically similar head rows were then bulked to produce breeder seed with a sample of this seed re-tested in yield trial and for milling and pasta-making quality. Breeders seed was provided to Pendleton Flour Mills Inc., to which OR 3920036 was exclusively licensed, which contracted McKay Seed Company Inc. (Route 1, Box 41, Almira, Washington 99103) to produce foundation seed. Harvested foundation seed was grown at two locations under

** Note: Topaz was released in 1977 by the ICCPT Institute at Fundulea in Romania.

irrigation (Echo, Oregon and Mattawa, Washington). The Mattawa field was inspected and certified by the Washington Crop Improvement Association and the Echo field was certified by the Oregon Seed Certification service. Registered seed was sold to commercial growers for the first time in the fall of 1998 by McKay Seed Company Inc.

(3) OR 3920036 has been grown in replicated yield trials (as well as in fertility and seeding rate trials and observation nurseries) from 1995 and has appeared phenotypically uniform and stable. The stability of its yield performance when compared to that of the widely grown Soft White Winter Wheat Stephens and other checks is shown in Table 1. OR 3920036 was also characterized by a consistently strong gluten as shown by the high SDS-sedimentation volume in Table 2 and Alveograph W and Pasta Firmness in Table 3.

(4) Black awned variants were observed in earlier seed increases at a frequency of 0.01 %. However, subsequent head rows for breeders seed appeared to be free of such variant.

16b

(1) Distinctiveness:
OR 3920036 is distinct from other durum cultivars released in the US which are, to the best of our knowledge, mostly spring types, by its winter growth habit. It has a more prostrate growth pattern, a greater tillering ability, a denser spike than the spring durum cultivars released in the US. While its winter hardiness is not as high as that of the leading SWW wheats, it is better than that of the spring durums. Most importantly, OR 3920036 is characterized by a substantially greater yield potential than spring durums (even when the latter are fall-planted in years where winter injury is not an issue). In addition, it has greater gluten strength than winter durum varieties introduced from countries where these are commonly grown (Mostly Turkey and Eastern Europe).

(2) Numerical data for yield and quality:
Yield testing was conducted in replicated yield trials arranged in a Randomized Complete Block Design with 4 replications at the Rugg's site, near Pendleton-OR. Plots were 5 feet wide by 20 feet long and sown at common commercial seeding rates (26 live seeds per square foot). Each year, trials were planted during the first weeks of October and harvested during the last week of July. Statistical analysis was conducted for each year separately and means differences between means were tested using Fisher's LSD at the 0.05 significance level. Data was collected for a number of traits. However, most of this consisted of observations and unreplicated measurements. Only the data collected from replicated measurements is presented here (grain yield and gluten strength).

per phone call of 1-18-01 MAH -1-19-01

CR 'Connie' is most Similar to 'Parus'
OR 3920036 is compared to two durum checks, namely spring durum cv. WPB 881 and a foreign introduction from the Ukraine, winter durum cv. PARUS. OR3920036 can be distinguished from spring durum WPB 881 by its markedly greater yield potential (Table 1). In three out of four years, OR 3920036 was characterized by a substantially and

significantly higher yield than WPB 881. During the four years of testing OR 3920036 was characterized by yield potentials similar to those of the much poorer quality winter durum PARUS and the long term SWWW STEPHENS, which was not the case for WPB 881.

OR 3920036 is distinct from most winter durum wheats worldwide (characterized by a generally very weak gluten) by its good quality attributes, particularly gluten strength. OR 3920036 was in fact characterized by a much greater gluten strength than winter durum PARUS, as demonstrated by its substantially greater SDS-sedimentation volume (Table 2) and Alveograph W parameter (Table 3). OR 3920036 produced a cooked pasta that was significantly "firmer" than that produced by winter durum cv. PARUS (Table 3).

Table 1: **Grain yield performance of OR 3920036 compared to spring durum cv. WPB 881, winter durum PARUS and soft white winter wheat cv. STEPHENS grown in the same yield trial at the Rugg's site, near Pendleton-Oregon, from 1995 to 1998.**
(Means with the same letter are not significantly different at the 0.05 level).

		Grain Yield (bu/ac)			
		1995	**1996**	**1997**	**1998**
OR 3920036					
	Mean Grain Yield	**126.9^{ab}**	**128.9^{a}**	**105.2^{a}**	**102.1^{ab}**
	Standard Deviation	8.2	7.7	8.5	12.1
	Range	*120.2-138.2*	*118.3-136.4*	*96.9-116.0*	*85.6-112.8*
WPB 881					
	Mean Grain Yield	**80.3^{c}**	**77.3^{b}**	**80.7^{b}**	**92.4^{ab}**
	Standard Deviation	7.3	7.3	4.1	6.9
	Range	*57.8-103.3*	*67.1-82.2*	*75.6-85.7*	*83.6-100.3*
PARUS					
	Mean Grain Yield	**124.6^{b}**	**133.9^{a}**	**93.5^{ab}**	**89.2^{a}**
	Standard Deviation	7.5	15.8	25.0	7.2
	Range	*114.8-130.5*	*119.0-153.5*	*61.8-122.1*	*81.7-97.2*
SWW cv. STEPHENS					
	Mean Grain Yield	**139.9^{a}**	**135.8^{a}**	**101.3^{a}**	**105.5^{b}**
	Standard Deviation	10.5	25.1	6.4	8.4
	Range	*128.4-152.3*	*113.9-166.6*	*93.7-109.1*	*97.4-116.4*
Entries in trial		42	18	21	18
Replications		4	4	4	4
Trial Range		57.8-152.3	67.1-166.6	61.8-125.3	64.8-121.2
Trial Mean		115.6	121.7	93.8	95.7
Trial Coefficient of Variation		9.10	11.53	12.21	11.51
Critical T value at the 0.05 level		1.98	2.01	2.00	2.01
Least Significant Difference (Fisher) at the 0.05 level		14.72	19.92	16.20	15.64

9800153

Table 2: **Gluten Strength (as estimated by the sedimentation volume in a SDS-Sedimentation test) of OR 3920036 compared to spring durum cv. WPB 881, winter durum PARUS grown in the same yield trial at the Rugg's site, near Pendleton-Oregon, in 1997 and 1998.**

		Sedimentation Volume (mm)	
		1997	**1998**
OR 3920036	Mean Grain Yield	**35.3[b]**	**39.0[b]**
	Standard Deviation	1.9	5.2
	Range	*34-38*	*36-45*
WPB 881	Mean Grain Yield	**41.0[a]**	**49.7[a]**
	Standard Deviation	2.4	2.5
	Range	*39-44*	*47-52*
PARUS	Mean Grain Yield	**18.0[c]**	**17.0[c]**
	Standard Deviation	0	0
	Range	*18-18*	*17-17*
Entries in trial		21	17
Replications		4	3
Trial Range		18-44	17-60
Trial Mean		33.5	40.3
Trial Coefficient of Variation		7.09	9.88
Critical T value at the 0.05 level		2.00	2.04
Least Significant Difference (Fisher) at the 0.05 level		3.36	6.63

Means with the same letter are not significantly different at the 0.05 level

Table 3: **Gluten Strength (as estimated by the Alveogrph W parameter) and Pasta Firmness of OR 3920036 compared to winter durum wheat cv. PARUS, grown in the same yield trial at the Rugg's site, near Pendleton-Oregon, in 1997 and 1998.**

		Alveograph Parameter W *(10^{-4} Joules)*		Pasta Firmness *(g.cm)*	
		1997	**1998**	**1997**	**1998**
OR 3920036	Samples analyzed	3	3	3	3
	Mean	**200.2**	**180.5**	**6.86**	**6.90**
	Standard deviation	25.1	21.0	0.47	0.10
	Range	*171.3-216.5*	*158.3-200.1*	*6.32-7.21*	*6.80-7.00*
PARUS	Samples analyzed	3	3	3	3
	Mean	**41.7**	**44.9**	**5.76**	**5.33**
	Standard Deviation	7.1	7.8	0.09	0.21
	Range	*34.7-48.8*	*38.6-53.6*	*5.65-5.82*	*5.10-5.50*
T-statistic for difference between means		10.52	10.48	3.95	11.75
Probability associated with T		0.0005	0.0005	0.02	0.0003
F' test statistic for equal variance		12.7	7.3	26.07	4.33
Probability associated with F'		0.15	0.24	0.07	0.38
		Variances are equal	Variances are equal	Variances are equal	Variances are equal

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
[redacted]
BELTSVILLE, MARYLAND 20705

EXHIB
(Whea

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)
State of Oregon, Acting by and through the State Board of Higher Education on behalf of Oregon State University

ADDRESS (*Street and No. or R.F.D. No., City, State, and Zip Code*)
c/o Office of Technology Transfer
Oregon State University
312 Kerr Administration Building
Corvallis, Oregon 97331-2140

FOR OFFICIAL USE ONLY

PVPO NUMBER 9800153

VARIETY NAME
Connie

TEMPORARY OR EXPERIMENTAL DESIGNATION
OR3920036

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [ ][ ][ ] or [ ][ ]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

[2] 1=Common 2=Durum 3=Club 4=Other (SPECIFY) _____

2. VERNALIZATION:

[2] 1=Spring 2=Winter 3=Other (SPECIFY) _____

3. COLEOPTILE ANTHOCYANIN:

[1] 1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

[1] 1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

[2] 1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (boot stage):

[2] 1 = Erect 2 = Recurved [ ] 1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

[0][2] Number of Days Earlier Than Stephens Soft White Winter Wheat

[ ][ ] Number of Days Later Than _____

8. ANTHER COLOR:

[1] 1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

DAW 11-22-00

[4][0] cm Shorter Than Stephens SWWW

[ ][ ]

10. STEM:

A. ANTHOCYANIN

[1] 1= Absent 2=Present

B. WAXY BLOOM

[1] 1=Absent 2=Present

C. HAIRINESS (last internode of rachis)

[1] 1=Absent 2=Present

D. INTERNODE (SPECIFY NUMBER) _____

[1] 1=Hollow 2=Semi-solid 3=Solid

E. PEDUNCLE

[2] 1=Absent 2=Present

[34] cm Length

11. HEAD (at Maturity):

A. DENSITY

[3] 1=Lax 2=Middense 3= Dense

B. SHAPE

[3] 1 = Tapering 2= Strap 3 = Clavate 4 = Other (SPECIFY) _____

C. CURVATURE

[2] 1 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

[4] 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

[1] 1 = White 2 = Tan 3 = Other (SPECIFY) _____

B. SHOULDER

[1] 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK

[1] 1 = Obtuse 2 = Acute 3 =Acuminate

D. LENGTH

[1] 1 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

E. WIDTH

[2] 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

[3] 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

[2] 1=Rounded 2=Angular

C. BRUSH

[1] 1=Short 2=Medium 3=Long

[1] 1 = Not Collared 2 = Collared

D. CREASE

[1] 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[1] 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel

13. SEED: (continued)

E. COLOR

[2] 1 = White 2 = Amber 3 = Red 4 = Other (SPECIFY) _____

F. TEXTURE

[1] 1=Hard 2=Soft

MH 11.22.00

G. PHENOL REACTION *(see instructions)*:

[X] 1 = Ivory 2 = Fawn 3 = Light Brown 4 = Dark Brown 5 = Black

See Exhibit D: Seed Laboratory Examination Report

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

Stem Rust *(Puccinia graminis* f. sp. *tritici)*
[2] _____

Leaf Rust *(Puccinia recondita* f. sp. *tritici)*
[2] _____

Stripe Rust *(Puccinia striiformis)*
[2] _____

Loose Smut *(Ustilago tritici)*
[0] _____

Tan Spot *(Pyrenophora tritici-repentis)*
[0] _____

Flag Smut *(Urocystis agropyri)*
[0] _____

Halo Spot *(Selenophoma donacis)*
[0] _____

Common Bunt *(Tilletia tritici* or *T. laevis)*
[0] _____

Septoria nodorum (Glume Blotch)
[2] _____

Dwarf Bunt *(Tilletia controversa)*
[0] _____

Septoria avenae (Speckled Leaf Disease)
[0] _____

Karnal Bunt *(Tilletia indica)*
[0] _____

Septoria tritici (Speckled Leaf Blotch)
[2] _____

Powdery Mildew *(Erysiphe graminis* f. sp. *tritici)*
[2] _____

Scab (*Fusarium* spp.)
[1] _____

"Snow Molds"
[0] _____

"Black Point" (Kernel Smudge)
[4] _____

Common Root Rot *(Fusarium, Cochliobolus* and *Bipolaris* spp.)
[0] _____

Barley Yellow Dwarf Virus (BYDV)
[0] _____

Rhizoctonia Root Rot *(Rhizoctonia solani)*
[0] _____

Soilborne Mosaic Virus (SBMV)
[0] _____

Black Chaff *(Xanthomonas campestris* pv. *translucens)*
[0] _____

Wheat Yellow (Spindle Streak) Mosaic Virus
[0] _____

Bacterial Leaf Blight *(Pseudomonas syringae* pv. *syringae)*
[0] _____

Wheat Streak Mosaic Virus (WSMV)
[0] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

Other (SPECIFY) _____
[ ] _____

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

Hessian Fly *(Mayetiola destructor)* [0] _____ Other (SPECIFY) [ ] _____

Stem Sawfly *(Cephus spp.)* [0] _____ Other (SPECIFY) [ ] _____

Cereal Leaf Beetle *(Oulema melanopa)* [0] _____ Other (SPECIFY) [ ] _____

Russian Aphid *(Diuraphis noxia)* [0] _____ Other (SPECIFY) [ ] _____

Greenbug *(Schizaphis graminum)* [0] _____ Other (SPECIFY) [ ] _____

Aphids [0] _____ Other (SPECIFY) [ ] _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

There is variability in the phenol. Percentages are noted.

OREGON STATE UNIVERSITY
SEED LABORATORY
CORVALLIS, OREGON 97331 U.S.A.
Phone: (541) 737-4464 FAX: (541) 737-2126

9800153

EXAMINATION REPORT

Test No. 172483 Date Recv'd 01-20-98

Laboratory Identification:

Triticum durum
Durum wheat

Research Sample

Kronstad
INDEX (RD007A); ACCT 25101
OSU CROP & SOIL SCIENCE RM 231B
CORVALLIS, OR 97331-3002

Sender's Identification:

NAME: Winter durum wheat
LOT NO.: OR 3920036
AMOUNT: Not Stated
FIELD NO.: 1997 WDELT 5.3

ph-28.00

This sample has been examined for:

PHENOL STAINING REACTION

Found:

This sample did not stain uniformly based on 400 seeds examined.
The staining pattern was:

Light	4.0%
Light medium	12.0%
Medium	22.0%
Dark medium	33.0%
Dark	29.0%

Date Completed:

01-23-98

COST CODE

p = purity
g = germination
fl = fluorescence
tz = tetrazolium
d = pest and disease
c = crop
w = weed
cw = crop and weed
r = rush
cc = copies

Adriel Garay, Manager

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
State of Oregon, Acting by and through the State Board of Higher Education on behalf of Oregon State University	OR3920036	Connie
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(include area code)*	**6. FAX** *(include area code)*
c/o Office of Technology Transfer Oregon State University 312 Kerr Administration Building Corvallis, Oregon 97331-2140	(541)737-0674	(541)737-3093
	7. PVPO NUMBER 9800153	

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain. ☑ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? ☑ YES ☐ NO
If no, give name of country

10. Is the applicant the original owner? ☑ YES ☐ NO ***If no, please answer one of the following:***

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

☑ YES ☐ NO **If no, give name of country**

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?

☑ YES ☐ NO **If no, give name of country**

11. Additional explanation on ownership *(if needed, use reverse for extra space)*:

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

STD-470-E (07-97) *(Destroy previous editions).*
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